Integrated/Arrival/Departure/Surface Operations

Completed Technology Project (2015 - 2021)

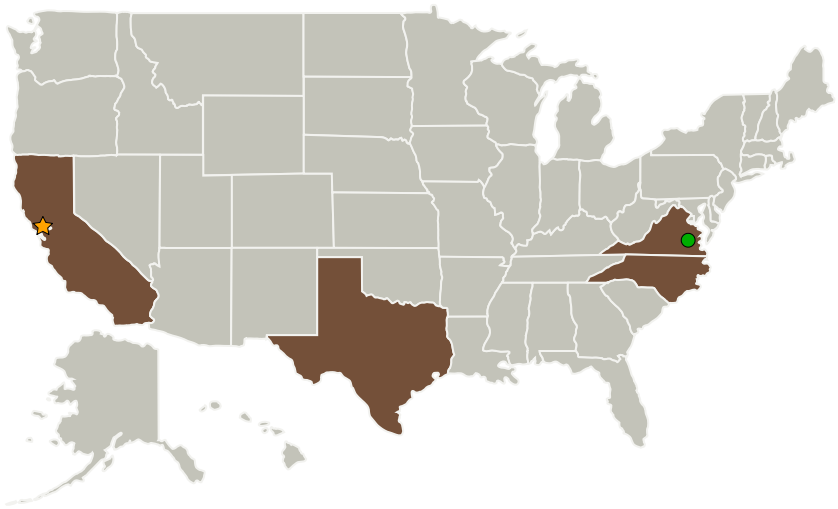
Project Introduction

Integrated/Arrival/Departure/Surface Operations develops and delivers an integrated metroplex traffic manager to the FAA NextGen and Air Traffic Organizations, flight operators, and airport operators, that leverages NASA, FAA and industry technologies to enable simultaneous improvement of the predictability and efficiency of arrival, departure and surface operations.

Anticipated Benefits

ATD-2 alleviates airport surface congestion by advising controllers to hold some departing flights at the gate instead of having the flights wait in long departure queues at the end of the runway. Shifting some of the departure wait time from the taxiway to the gate saves fuel, reduces emissions, and gives airlines and passengers more options in the period prior to pushback.

Primary U.S. Work Locations and Key Partners



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Organizations Performing Work	Role	Type	Location
★Ames Research Center(ARC)	Lead Organization	NASA Center	Moffett Field, California
American Airlines	Supporting Organization	Industry	
Charlotte-Douglas International Airport(CLT)	Supporting Organization	Industry	Charlotte, North Carolina
Federal Aviation Administration(FAA)	Supporting Organization	US Government	Washington, District of Columbia
●Langley Research Center(LaRC)	Supporting Organization	NASA Center	Hampton, Virginia
National Air Traffic Controllers Association	Supporting Organization	Industry	

Primary U.S. Work Locations	
California	North Carolina
Texas	Virginia

Project Website:

https://www.aviationsystemsdivision.arc.nasa.gov/research/atd2/index.shtml

Organizational Responsibility

Responsible Mission Directorate:

Aeronautics Research Mission Directorate (ARMD)

Lead Center / Facility:

Ames Research Center (ARC)

Responsible Program:

Airspace Operations and Safety Program

Project Management

Program Director:

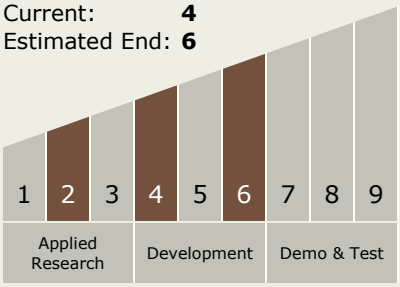
Akbar Sultan

Project Manager:

Shawn A Engelland

Technology Maturity (TRL)

Start: **2**
Current: **4**
Estimated End: **6**



Technology Areas

Primary:

Continued on following page.

Technology Areas *(cont.)*

- TX16 Air Traffic Management and Range Tracking Systems
  - TX16.3 Traffic Management Concepts

Target Destination

Earth